

## Capital Weld Cleaners CEO: Times are changing for Stainless Steel Weld Cleaning

From the beginning of time, or, at least as far back as welding goes, most stainless steel fabrication or welding shops have cleaned stainless steel welds via the old: abrasive, wire brush, extreme rubbing, or the use of harsh chemicals methods. Not to say these are not adequate ways to clean welds, but there is an alternative out there that is safer, cleaner, less labor intensive, and very cost effective.

The process we're talking about is: electro chemical weld cleaning. First, you need a power supply to satisfy the "electro" portion of the equation, and then you need the "chemical" portion to complete the circuit. The power supply should have at least a couple of voltage settings for versatility. Also of importance is the capability to go from a fiberglass sleeve for straight, easy to reach welds, or to a brush, for harder to reach areas, such as tight corners. Normally the solution you will use is a light acid, and mostly water mixture. Then you dip the wand with your sleeve or brush attached into the solution, flip the switch, and then lightly rub the welded area that needs to be cleaned. Yes, it is this simple! The cleaning process can be done to the tune of anywhere from 2-6 feet per minute, depending on the welds you are cleaning. The thicker and more discoloration the welded area has, the slower the process goes. As a general rule, TIG welds normally will clean much quicker than MIG welds.

The next part of the process is to remove the water/acid solution by neutralizing it with water and/or neutralizer. Some weld cleaner manufacturers absolutely need a neutralizer, and some companies only need to use water to break down the water/acid solution. "Will you need to use a neutralizer?" is a good question to ask, when looking into a weld cleaner. And finally, wipe the part down with a clean rag, and you're finished. Your weld should look very similar to the stainless steel around it, and by doing in this fashion, you are not altering the stainless steel around the weld at all, unlike abrasives. Face it, when you use abrasives, you will alter the finish of what's surrounding the area. It's very hard to avoid this.

Another advantage of using the electro chemical weld cleaning method is, it includes passivation to the cleaned area at the same time it's cleaning it. Maybe at this point you're asking, what is passivation?

Passivation is defined as "the removal of exogenous iron or iron compounds from the surface of stainless steel by means of a chemical dissolution, most typically by a treatment with an acid solution that will remove the surface contamination, but will not significantly affect the stainless steel itself." In lay terms, the passivation process removes "free iron" contamination left behind on the surface of the stainless steel from machining and fabricating. These contaminants are potential corrosion sites that result in premature corrosion and ultimately result in deterioration of the component if not removed. In addition, the passivation process facilitates the formation of a thin, transparent oxide film that protects the stainless steel from selective oxidation (corrosion).

So, what are 6 important features you should look for in a reputable electro chemical weld cleaner?

- Does it come with at least a 30 day Satisfaction Guarantee? If not, why not?
- Is the warranty at least 2 years? Again, if not, why not?

- What are the consumable costs in comparison to other manufacturers? Some manufacturers are as much as 2-3 times more for very similar consumable products. This alone could cost you thousands of dollars per year!
- Do you have to pay more, or have to buy a separate wand to use a brush option? Why?
- Does the manufacturer offer all necessary cabling and consumables to flip the switch and clean welds in their “starter kit”?
- Does the manufacturer offer a machine with 2 wand assemblies to double your production?

The bottom line is this. You can have an alternative that is safer, cleaner, less labor intensive, and very cost effective, so why wouldn't you look into this? Payback on some of these machines is less than one month. It could be even less than that with a 2 wand machine!

Stop cleaning your stainless steel welds the old fashioned way. This is the best option to remove weld discoloration from stainless steel.